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ABSTRACT

The bibliography is divided into two sections: "Doctoral Dissertations of Interest to Teachers of Earth Science 1960-1969," and "Bibliography of Selected References." The first section includes entries for 13 dissertations and each entry indicates the originating university and the dissertation reference location in "Dissertation Abstracts." The other section contains over 100 entries for articles found mainly in science education and earth science education periodicals. Some of these entries have brief annotations. Coverage is broad and related to most areas of earth science education, such as research, curriculum and programs, instruction, evaluation, and teacher education. (PR)

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SELECTED BIBLIOGRAPHY

for

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DOCTORAL DISSERTATIONS OF INTEREST TO TEACHERS OF EARTH SCIENCE 1960-1969

Ashbaugh, A. C., Ed. D. An Experimental Study for the Selection of Geological Concepts for Intermediate Grades. U. of Georgia, 1964. 138 pages. Dissertation Abstracts, Vol. XXV, page 5775.

Baker, Vernon R., Ed. D. The Status of Earth Science Education in Arkansas. U. of Arkansas, 1967. Dissertation Abstracts, Vol. XXVII-A, page 137.
"Research indicated that there were gross weaknesses in teacher preparation in Arkansas."

Glenn, William H., Ph.D. The Effectiveness of Learning in Earth Science Geology Units Through Field Trip Experiences: A Study of the Effects of Two Different Methods of Presenting Field Trip Experiences on Pupil Ability to Make Observations of and to Form Hypothesis Regarding Selected Geologic Features. New York University, 1968. Dissertation Abstracts, Vol. XXX-A, page 206.
"Research indicated no significant difference between group taken into the field or group taught with the aid of 35 mm. color slides."

McDonald, Dale E., Ed. D. The Utilization of Planetaria and Observations in Secondary Schools. U. of Pittsburgh, 1966. Dissertation Abstracts, Vol. XXVII-A, page 4084.
"This descriptive-survey indicated that the biggest rate of planetarium use was for concepts of motion and celestial geometry, while observatory use centered around teaching of lunar motion and planet characteristics."

Mayer, Victor J., Ph.D. A Study of Existing Pre-Service Earth Science Teacher Preparation Programs. U. of Colorado, 1966. Dissertation Abstracts, Vol. XXVIII-A, page 989.
"In programs studied by use of questionnaires, the courses in the earth sciences in general were found not to provide learning experiences which develop familiarity with investigative and student-centered techniques of instruction."

Qutub, Musa Y., The Objectives of the Earth Science Curriculum Project; an Evaluation of their Achievements: (Unpublished Doctoral Dissertation). Iowa State University, Ames, Iowa, 1969.

Rosemergy, John C., Ph.D. An Experimental Study of the Effectiveness of a Planetarium in Teaching Selected Astronomical Phenomena to Sixth-Grade Children. U. of Michigan, 1967. Dissertation Abstracts, Vol. XXVIII-A, page 4959.
"The study pointed out that the use of a planetarium made no difference in understanding phases of the moon and the apparent turning of the sky when compared to a group not using the planetarium."

Sargent, Earl A., Ed. D. A Study to Determine Certain Characteristics of Earth Science Curriculum Project Teachers and Students in the Permissive or Authoritarian Classrooms which Lead to Greater Academic Achievement in these Students. Colorado State College, 1966. Dissertation Abstracts, Vol. XXVII-A, page 4451.
"This statistical study pointed out types of teaching techniques to use in the classroom."

Schirner, S., Ph.D. A Comparison of Student Outcomes in Various Earth Science Courses Taught by 17 Iowa Teachers. The University of Iowa, 1967. Dissertation Abstracts, Vol. XXVIII-A, page 3081.
"Research indicated that students studying ESCP developed into significantly better critical thinkers and tended to show greater gains in understanding science than did students taking a non-ESCP course."

Shrum, John Wesley, Ph.D. A Proposed Curriculum for the Preparation of Earth Science Teachers. Ohio State University, 1963. 314 pages. Dissertation Abstracts, Vol. XXIV, page 4576.

Smith, Billy A., Ed. D. An Experimental Comparison of Two Techniques (Planetarium Lecture-Demonstration) of Teaching Selected Astronomical Concepts to Sixth-Grade Students. Arizona State University, 1966. Dissertation Abstracts, Vol. XXVII-A, page 887.
"Research indicated that planetarium use was significant for selected astronomical concepts."

Sonnier, Isadore L., Ed. D. A Study of the Number of Selected Ideas in Astronomy Found in Earth Science Curriculum Project Materials Being Taught in College and University Astronomy Courses. Colorado State College, 1966. Dissertation Abstracts, Vol. XXVII-A, page 2433.
"This study indicated that teacher preparation for ESCP was being met by college and university astronomy courses."

Toohey, J. V., Ed. D. The Comparative Effects of Laboratory and Lectures Methods of Instruction in Earth Science and General Science Classes. Arizona State University, 1963. 142 pages. Dissertation Abstracts, Vol. XXIV, page 3241.

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"An experimental study that has listed 37 of 40 geological concepts considered adequate for grades 4 through 6.

Barlett, M. F. "Geology in the Kindergarten." Grade Teacher. Vol. 81, April, 1964. p. 18.

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Benz, G. "Experimental Evaluation of Field Trips for Achieving Information Gains in a Unit on Earth Science in Four Ninth Grade Classes." Science Education. Vol. 49, Feb. 1962. pp. 43-9.

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Clements, G. "Our Changing Earth." Grade Teacher. Vol. 77. March, 1960. pp. 43.

Cranston, E. J. and Linn, G. F. "Spur to Individual Investigations in Natural Science." Ohio Schools. Vol. 40. October, 1962. pp. 14-5.

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Davison, H. M. and Fowler, H. S. "Earth Science Course Evaluation: What do They Learn in Earth Science?" Science Education. Vol. 49. March, 1965. pp. 184-5.

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"Experiment described relates geological time and astronomical distances using a 10-meter piece of tape."

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"Interdisciplinary nature of oceanography as an excellent vehicle for teaching science concepts and skills at the junior high level is discussed."

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"Advantages and disadvantages of earth science teaching at the junior high school level is presented."

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Hewitt, Philip C. "Why Study Geology?" Journal of Geological Education. Vol. 15, February, 1967. pp. 8-10.
"Author pointed out that geology is not only for geologists but is, or should be, for everyone."

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"An outline is presented for establishing outdoor study areas which can provide unique opportunities for school personnel while not requiring new funds."

Knapp, Clifford E. "The Slope of the Land." Science and Children. Vol. 6. March, 1969. pp. 14-15.
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"Development and design of a one year course in oceanology for high school students is presented."

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"Earth science is shown to unify the teaching of science in general. Many pertinent questions are discussed."

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"Teaching philosophy of the Pennsylvania approach differs from that of ESCP and the New York approach in the laboratory work is secondary to classroom discussion."

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